

Notice of Allowability

Application No.

10/584,082

Examiner

Elizabeth F. McElwain

Applicant(s)

OHYAMA, KANJI

Art Unit

1638

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed 9/28/10.
2. ☒ The allowed claim(s) is/are 1-4,18-21,23 and 25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 8/26/10
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 11/29/10.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☒ Other amended oath.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Zhengyu Feng on November 24, 2010.

The application has been amended as follows:

The following claim listing is to replace all prior versions of the claims in the application:

Claim 1. (Currently amended): An isolated *Marchantiales*-derived nucleic acid having at least 90% identity to the nucleotide sequence of SEQ ID NO: 1 or ~~[[a]]~~ the complementary sequence thereof, wherein the nucleic acid encodes a protein having $\Delta 6$ fatty acid desaturating activity.

Claim 2. (Previously Presented): The isolated nucleic acid of claim 1, wherein the nucleic acid consists of the nucleotide sequence of SEQ ID NO: 1.

Claim 3. (Previously Presented): The isolated nucleic acid of claim 1, wherein the nucleic acid consists of the nucleotide sequence of nucleotides 253 to 1698 of SEQ ID NO: 1.

Claim 4. (Previously Presented): The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a protein having the amino acid sequence of SEQ ID NO: 2, or having the amino acid sequence that has been modified by substitution, deletion, insertion, and/or addition of one to ten amino acids of SEQ ID NO: 2.

Claims 5-17. (Canceled).

Claim 18. (Previously Presented): A recombinant expression vector comprising the isolated nucleic acid of claim 1.

Claim 19. (Currently amended): A ~~non-human transformant~~ transformed cell comprising the isolated nucleic acid of claim 1.

Claim 20. (Currently amended): A plant ~~expressing the isolated nucleic acid of claim 1~~, a progeny of [[the]] said plant, a vegetatively propagated plant of [[the]] said plant, or a tissue of [[the]] said plant, wherein the isolated nucleic acid of claim 1 is expressed in ~~the progeny, the vegetatively propagated plant, or the tissue~~ the plant, the progeny of said plant, the vegetatively propagated plant of said plant, and the tissue of said plant.

Claim 21. (Currently amended): The plant, the progeny of said plant, the vegetatively propagated plant of said plant, or the tissue of said plant of claim 20, wherein said plant, the progeny of said plant, the vegetatively propagated plant of said plant, or the tissue of said plant has a modified fatty acid composition, ~~a progeny of the plant, a vegetatively propagated plant from the plant, or a tissue of the plant, wherein the progeny, the vegetatively propagated plant, or the tissue expresses the isolated nucleic acid of claim 1.~~

Claim 22. (Canceled).

Claim 23. (Previously Presented): A method of producing fatty acids comprising growing the plant of claim 20 and obtaining said fatty acids from said plant or plant tissue.

Claim 24. (Canceled).

Claim 25. (Currently amended): A method of modifying a fatty acid composition comprising expressing the isolated nucleic acid of claim 1 in a plant.

Claims 26-28. (Canceled).

Oath and Declaration

The oath has been amended to correct the filing date of PCT/JP2004/019196. A copy of the amended oath is attached.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (571) 272-0802. The examiner can normally be reached on increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EFM

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Primary Examiner, Art Unit 1638